

Twenty-five Years of JEAB: A Survey of Selected Demographic Characteristics Related to Publication Trends

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Some demographic characteristics related to authorship of research reports in the *Journal of the Experimental Analysis of Behavior* (JEAB) were analyzed as to affiliation and location (U.S. or foreign) of authors. In addition, the incidence of publications by the members of the editorial board was tallied. The number of different affiliations of JEAB authors has decreased steadily over the past several years with substantially fewer papers deriving from independent laboratories and medical schools. While the number of papers by foreign authors has generally increased over the years there is a recent reduction in their number. These data paint a mixed picture of the "health" status of the experimental analysis of behavior as reflected in its major publication outlet.

Over the last 25 years the *Journal of the Experimental Analysis of Behavior* (JEAB) has remained the pre-eminent outlet for the publication of operant research. As such, it is reasonable to assume that publication trends in JEAB could provide information relative to demographic trends in the field as a whole. Moreover, research published in JEAB may be considered indicative of the basic science activity of behavior analysts. JEAB authors reference other JEAB papers far more often than any other source; references to JEAB by applied behavior analysts who publish in the *Journal of Applied Behavior Analysis* (JABA) exceed those to all other experimental sources combined (Poling, Picker, Grossett, Hall-Johnson, & Holbrook, 1981). Indices related to sources of articles published in JEAB would thus provide reliable clues as to the breadth of interest, i.e., "health," within the field; furthermore, quantitative indices related to the locale and scope of activity within the field would be informative with respect

to both historical and current trends in research output.

The experimental analysis of behavior is not, in principle, a specialized subfield with an exclusive set of research problems, methodology, and theory. Rather, it is a broad conceptual and philosophic approach to the study of behavior in general. Thus behavior analysts need not be constrained by a rigidly defined theoretical approach which dictates particular forms of empirical inquiry into a single, narrow subfield of psychology. The opening sentence of Skinner's *About Behaviorism* (1974) states, "Behaviorism is not the science of human behavior, it is the philosophy of that science" (p. 3), making it clear that if one accepts the experimental analysis of behavior as the most promising practice of that philosophy (as does Skinner, see p. 7), all behavioral phenomena are to be included within its purview.

To the extent that a broad range of topics and behavioral events are examined empirically and conceptually by behavior analysts, the experimental analysis of behavior would appear more or less "healthy" or successful at the task it has set before itself. The range and variability of research settings in which we conduct our investigative activities bears a close relationship to the types and scope

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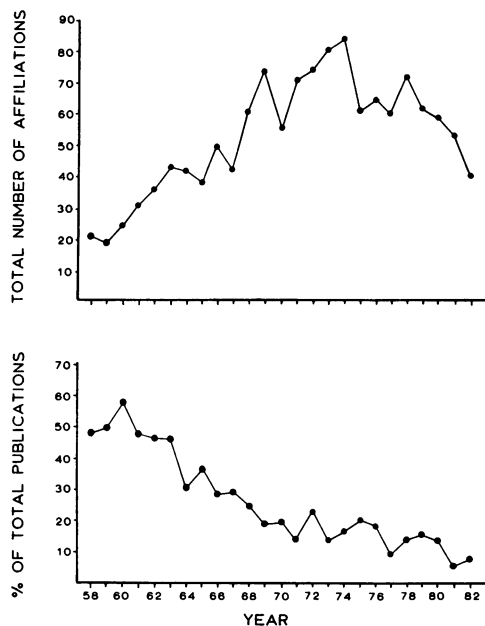


Figure 1. Top panel. Total number of different affiliations represented by authors of JEAB articles for each year since 1958. Bottom panel. The percentage of JEAB publications represented by authors affiliated with medical schools and independent laboratories, e.g., hospitals, industry, government.

of our methods, the variety of problems examined, and the novelty of analyses provided. In the present paper, articles published in JEAB since 1958 were analyzed as to the affiliation (i.e., colleges, universities, medical schools, government, private laboratories, etc.), location (United States or foreign) of authors, as well as the number of articles published by members of the Board of Editors.

The top panel of Figure 1 depicts the total number of different affiliations of JEAB authors for each year since 1958. On collaborative papers, respective affiliations of all authors were included in the count. Although considerable variability is present in these data (especially from 1958 to 1974), the number of affiliations has shown a general increase. In 1974 a peak of 84 different research settings were represented by JEAB authors. Since then there has been a moderate decline in the number of publications associated with different affiliations, reaching a 15-year low in 1982. Since the variety of settings

connotes the breadth of research activity, this downward trend indicates a general constriction, perhaps due to difficulty in obtaining support for basic behavioral research. In the absence of comparable data from areas of applied behavior analysis, complete information regarding effects of decreased support is not available. Several authors have recently suggested, however, that decreased regard for basic operant research is likely to have negative consequences for basic as well as applied research (see, e.g., Branch & Malagodi, 1980; Deitz, 1978; and Michael, 1980). Decreased variability in the number of sources engaging in operant research is likely to have similar effects. This decrease in the number of sources from which operant research is generated is particularly discomfiting in light of recent suggestions that experimental behavior analysts become more actively involved in investigating a broader range of topics and problem areas (Hake, 1982; Harzem, Note 1, Note 2; Skinner, Note 3). Although there is no requisite relationship between the number of settings and the breadth of operant inquiry, fewer research environments may limit the variety of topics and issues investigated and retard the development of novel experimental methodology and technology.

The percentage of papers authored by researchers from medical schools and independent laboratories (e.g., hospitals, government agencies, industry) is shown for each year of JEAB publication in the lower panel of Figure 1 (research reports from colleges and universities account for all other JEAB publications). These data show a dramatically decreasing trend. During the first six years of JEAB's history, the number of reports from independent laboratories and medical schools accounted for roughly one-half of all published papers. Since that time, however, the percentage of articles published by researchers in those areas has uniformly decreased. In fact, the percentage of articles published by researchers from independent laboratories and medical schools fell to an all-time low of 6% in 1981.

It is probable that this decline in publications from these sources can at least be partially attributed to factors similar to those responsible for the recent decline in the total number of different affiliations. Moreover, researchers affiliated with governmental, industrial, and medical agencies must be responsive to the immediate needs of their employer and/or consumers. This notion is verified by survey results obtained from psychologists working in medical schools. Nathan et al. (1979) surveyed the time spent in various professional activities by psychologists on medical school faculties. While the number of these positions increased substantially over the years included in the survey (4.4 psychologists per medical school in 1955 to 20.7 psychologists in 1976), the reported time spent in research activities had decreased from a high of 45% of total work time in 1964, to less than 28% in 1977. The decrease in research activity in medical schools and other independent laboratories limits the number of settings in which basic behavioral principles may be examined and theoretical issues developed and tested. Recent concerns regarding the effects of the increasing insularity of the basic and applied areas of the experimental analysis of behavior (Pierce & Epling, 1980; Poling et al., 1981; Popen, Note 4) may be supported by these data. While it is beyond the scope of this paper to argue at length the relative merits or effects of these conditions on the field (these issues have been taken up elsewhere, e.g., Deitz, 1978; Michael, 1980), Deitz (1978) has suggested that increased polarization of the field along the "applied-basic" continuum facilitates the development of unique and discrepant scientific terminologies, procedures, and criteria for acceptance of "good data," all of which have negative implications for behavior analysis as a whole.

Figure 2 shows the percentage of JEAB articles published by foreign authors (i.e., authors which reported data obtained in laboratories located outside the United States) for each year since 1958. There has been a general increase in their number over this period. In 1977, 25% of the

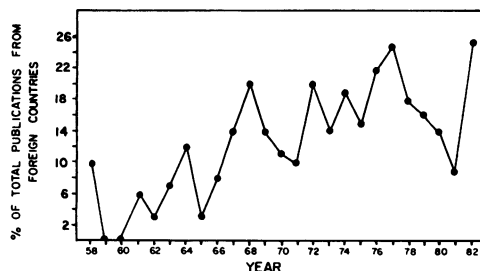


Figure 2. The percentage of the total number of JEAB publications authored by foreign researchers each year since 1958.

papers published in JEAB were authored by foreign researchers. In 1981, the number of foreign papers reached a 16-year low, less than 9%, but 1982 marked an all-time high, at 26%. While foreign authors continue to make a substantial contribution to the pages of JEAB, the 1982 high point may be only a temporary aberration in a steady downward trend. The percentages of papers from different countries out of the total number of papers published from authors outside the United States are: Canada, 41%; United Kingdom, 31%; New Zealand, 15%; Brazil, 4%; and all others, 9%.

Figure 3 shows the percentage of articles published by members of the Board of Editors each year over the past 25 years. Where members of the Board collaborated, only one editor's name was tallied. The original editors, who founded the journal, accounted for half of the contents during the first year. The fact that members of the Board of Editors and JEAB authors were frequently one-and-

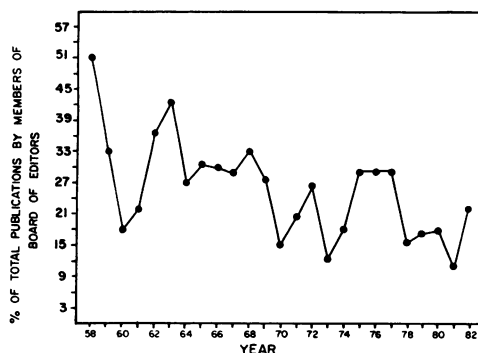


Figure 3. The percentage of the total publications each year authored by the members of the Board of Editors of JEAB for that volume for each year since 1958.

the-same is evidenced by the large percentage of papers authored by board members in 1958, and to a lesser extent, 1961 and 1962. Since this point the percentage contributed by the editors has shown a general decrease, reaching its lowest point in history (11%) in 1981.

These data paint a mixed picture of JEAB's "health status." To the extent that research published in JEAB is indicative of activity in the field as a whole, there appear to be reasons for concern. Perhaps the most important negative indicator is the evidence of fewer sources now of basic behavioral research. While the total number of affiliations by JEAB authors has decreased over the last five years, the percentage of publications from colleges and universities has continued to increase steadily relative to reports by researchers in other settings. The experimental analysis of behavior involves the search for general principles that relate behavior and changes in behavior to environmental events. Studying behavior in a variety of contexts and in response to a wide range of independent variables would seem to facilitate the discovery of such general functional relations. While the novelty and creativity of research design is not necessarily constrained by work within any particular setting, it is likely that fortuitous findings and novel applications of operant techniques would be more probable in increasingly diverse research environments. Unfortunately, it appears behavior analytic activities may be following a similar constrictive trend outside the United States as well.

A positive sign in JEAB publication trends is the low percentage of publications by members of the editorial board. This number has shown a general decrease over the years, reflecting a broadly-based acceptance policy for research reports. On a cautionary note, such a low percentage also indicates that board members are generally not numbered among the most active contributors. It is likely that the members of the editorial board, while publishing less frequently in JEAB, also publish elsewhere. Moreover, though no quantitative account was made, Board members frequently con-

tribute in an advisory capacity to a number of JEAB reports by graduate and recently post-graduate researchers.

In addition to the obvious constraints placed on researchers in times of fiscal cutbacks, there are at least three other conditions that may have contributed to decreases in the variety of research settings. First, the scarcity of employment opportunities for basic research psychologists (not unrelated to economic conditions) impacts the quantity of research reported. Fewer undergraduate students seek admission to experimental psychology programs during a climate where emphasis is placed on more immediately "applicable" academic activities. Thus the number and variety of research reports has probably foundered partially as a result of these conditions in that a significant number of JEAB reports have traditionally derived from graduate student research projects, i.e., theses and dissertations.

Second, interests in the study of behavior have also become more specialized over the past decade. For example, for many years JEAB was a favored outlet for publication of studies of the relations between chemical agents and behavior and such reports constituted a substantial number of the submissions to the journal each year. The inception of more specialized journals in this area (e.g., *Pharmacologia*, 1964; *Pharmacology, Biochemistry, and Behavior*, 1973) has undoubtedly reduced the number of such JEAB publications coming from a variety of academic and non-academic settings. Similarly, the inception of JABA in 1968 has no doubt siphoned reports of investigations of "immediate social importance" (e.g., experimental analysis of problem behaviors such as enuresis, littering, etc.) away from JEAB.

Third, there has been an increased concern among behavior analysts with the behavioral characteristics of particular animal species since the mid-60s, i.e., studies of "species-specific" behavior. As such interests have burgeoned, more researchers have turned to other specialized journals (e.g., *Animal Learning and Behavior*, 1973; *Journal of Experimental*

Psychology: Animal Behavior Processes, 1975; *Learning and Motivation*, 1970). Concomitantly, potential experimental analysis of behavior graduate students have been lured away from the study of broader issues in behavior analysis and to these other areas.

Thus, it seems that there are several related factors which may account for the decrease in the number of experimental analysis of behavior research settings. These factors derive from conditions outside (economic and employment trends) and inside (increasing specialization of graduate training and research interests and the advent of specialized journals) behavior analysis. In light of recent concerns regarding future directions in the experimental analysis of behavior, a diminution in the number of research settings, institutional, governmental, private, foreign, or otherwise, may prove to have debilitating effects for the experimental analysis of behavior by postponing the impact that our science could have on both the advancement of scientific knowledge and the betterment of society.

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